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POLIOMYELITIS SURVEILLANCE
REPORT NO. 53 DECEMBER 9, 1955

Department of Health, Education and Welfare
Public Health Service
Communicable Disease Center

Poliomyelitis Surveillance Unit
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SPECIAL NOTE

The information in this report represents a factual summary of data reported to the Poliomyelitis Surveillance Unit from State Health Departments, Epidemic Intelligence Service Officers, participating laboratories and other pertinent sources. Much of the material is preliminary in nature and is subject to change. The distribution of this report is strictly limited to federal and state officials, to directors of participating laboratories and to other official or non-official persons having responsibility for the control of poliomyelitis in the nation. It is understood that this report will not be quoted in public nor will its contents be released to the press or to unauthorized persons. Any release of this information will be made by the Office of the Surgeon General, U.S. Public Health Service. State Health Officers, of course, are free to reveal any information they may wish concerning data from their state.

All readers should be cautioned regarding the limitation of data presented herein. Current and cumulative data are given concerning reported cases of poliomyelitis in vaccinated persons and among their familial and community contacts. It should be recognized that these data do not constitute a controlled evaluation of poliomyelitis vaccine. For this reason, interpretations and conclusions based on material in these reports must be guarded.

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## I. Current Poliomyelitis Morbidity Trends

Poliomyelitis incidence by weeks for the current year, with similar data for the three preceding years, is presented in Figure 1, drawn from data published by the National Office of Vital Statistics. Incidence by states reported for the weeks ending October 29 through December 3 is presented in Table 1, together with a six-week total for this and the three previous years. National incidence fell only very slightly this week since there was little change in incidence reported from most states; only Massachusetts and Texas reported significant decreases.

## II. Age Distribution Analysis

Plans for termination of the reporting of data for the Age Distribution Analysis Study were given in PSU Report No. 49 (November 4). Weekly reporting of cases for this study should now be discontinued. No tabulations of these data appear this week, but it is planned to present further analyses early in 1956 as a final report of this Study.

The Statistics Section, CDC, has prepared population estimates by states by single years of age under 15 for July 1, 1955, from data and methods provided by the Bureau of the Census. These estimates were prepared for use in the Age Distribution Analysis Study. They are only rough estimates, but it is felt that they are sufficiently accurate for these purposes. At a later date, it is planned to prepare further estimates by five-year age groups for older ages. PSU will be glad to make any of these estimates available upon request.

## III. Special Studies

A current revision of Special Study data from Illinois which originally appeared in PSU Report No. 50 is reported by Dr. Ruth E. Church, Chief, Bureau of Communicable Disease Control, and James Tuthill, M.D., Epidemic Intelligence Service Officer assigned to Illinois.

State of Illinois
Poliomyelitis Attack Rates in 6 to 9 Year Olds
(Preliminary Data, Cases with Onsets April 19 to November 1, 1955)

| Vaccination Status | Population Estimates | Cases | | | Rates (per 100,000) | | |
|---|---|---|---|---|---|---|---|
| | | P | NP | T | P | NP | T |
| Vaccinated* | 357,200 | 11 | 66 | 77 | 3.1 | 18.5 | 21.6 |
| Unvaccinated | 360,800 | 44 | 91 | 135 | 12.2 | 25.2 | 37.4 |

* Received one dose of polio vaccine.

In PSU Report No. 52 (December 2), there appeared a report from Dr. W.R. Giedt, Washington State Department of Health, and Dr. Donald Wysham, Epidemic Intelligence Service Officer assigned to the State, comparing polio

incidence in eight counties in Washington that did not vaccinate school children in 1955 with incidence in 30 counties that did. Poliomyelitis rates among unvaccinated individuals so far this year are about 50% higher in counties in which there was no vaccination program than in counties where first and second grade children were vaccinated. It was suggested that these lower rates among unvaccinated individuals in counties where school children were vaccinated might be partially attributable to the vaccine. Dr. Wysham has now compiled incidence rates for the past five years for counties participating in the vaccination program and for counties not participating:

POLIO RATES (per 100,000) IN THE STATE OF WASHINGTON

| Counties* | 1950 | 1951 | 1952 | 1953 | 1954 | 5 yr. mean | 1955** |
|---|---|---|---|---|---|---|---|
| 8 participating | 35 | 12 | 70 | 20 | 22 | 32 | 19 |
| 30 non-participating | 24 | 20 | 48 | 17 | 18 | 26 | 12 |

* One county excluded because of partial participation.
**Excluding 5-9 year olds, since this group received most of the vaccine administered.

Thus, rate differences as great as that observed this year have occurred in past years as well, so that the 1955 differences may be of no significance. Dr. Wysham says in conclusion:

> "It is nevertheless important, I feel, to stimulate other states to produce this type of data, since this may be one of very few similar opportunities to establish the efficacy of the vaccine in this respect. Such a study might throw light upon the usefulness of the poliomyelitis vaccine in preventing community spread of the polio virus."

## IV. Routine Polio Surveillance

The tabular summary lists in detail the polio cases among vaccinated children accepted November 30 through December 7 with revisions of previously listed cases. Table 2 presents these cases and total cases to date. Of the 14 new cases, four are paralytic and 10 non-paralytic. One paralytic and three non-paralytic cases (including a late report of a May case) occurred within 30 days following vaccination; the paralytic case, RI-18, occurred eight days after vaccination, with first paralysis occurring two days later in the left side of the soft palate. The child was discharged from the hospital a few days later with only minimum bulbar signs on physiotherapy examination.

(This report was prepared by Dr. Neal Nathanson and Wm. Jackson Hall, Ph.D., with assistance from the Statistics Section, CDC.)

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# Figure 1: CURRENT U.S. POLIO INCIDENCE COMPARED WITH YEARS 1952-1954

DATA PROVIDED BY NATIONAL OFFICE OF VITAL STATISTICS

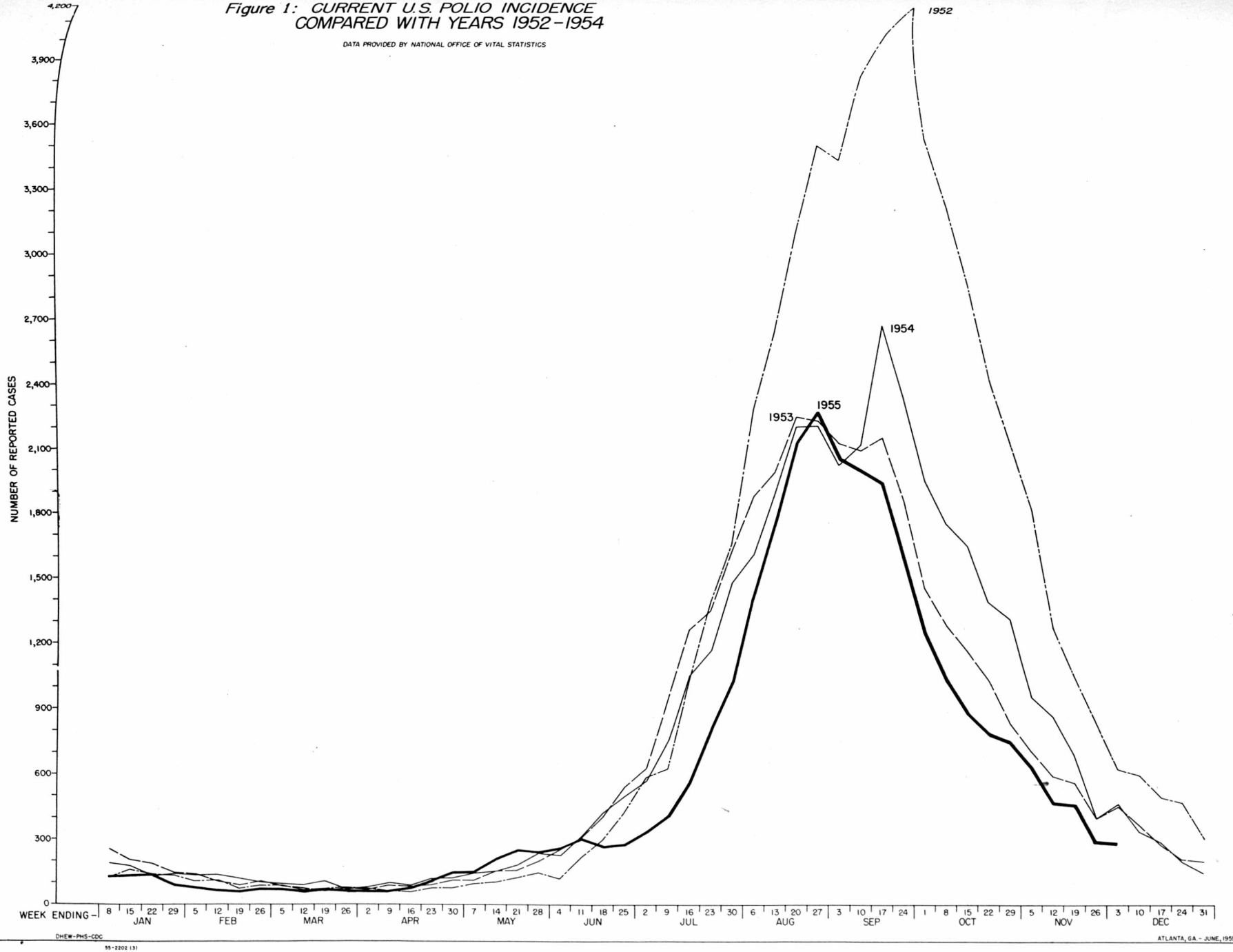


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Table 1

TREND OF 1955 POLIOMYELITIS INCIDENCE

| State | Cases Reported to NOVS* During Week Ending: 10/29 | 11/5 | 11/12 | 11/19 | 11/26 | 12/3 | 6 Week Total | Comparable Totals in: 1954 | 1953 | 1952 |
|---|---|---|---|---|---|---|---|---|---|---|
| United States | 749 | 628 | 469 | 459 | 290 | 283 | 2878 | 4682 | 3537 | 7715 |
| North East | | | | | | | | | | |
| Maine | 7 | 7 | 1 | 9 | 3 | 2 | 29 | 20 | 13 | 28 |
| New Hampshire | 2 | 1 | - | 1 | - | 1 | 5 | 17 | 22 | 10 |
| Vermont | 4 | - | 2 | 4 | - | 3 | 13 | 13 | 23 | 13 |
| Massachusetts | 90 | 67 | 43 | 52 | 37 | 17 | 306 | 141 | 102 | 66 |
| Rhode Island | 18 | 17 | 12 | 15 | 4 | 8 | 74 | 14 | 35 | 23 |
| Connecticut | 25 | 14 | 5 | 11 | 6 | 5 | 66 | 117 | 35 | 39 |
| New York | 94 | 98 | 40 | 38 | 22 | 23 | 315 | 577 | 404 | 404 |
| New Jersey | 13 | 10 | 5 | 11 | 3 | 8 | 50 | 187 | 54 | 107 |
| Pennsylvania | 14 | 9 | 8 | 15 | 2 | 8 | 56 | 259 | 147 | 221 |
| North Central | | | | | | | | | | |
| Ohio | 44 | 33 | 26- | 7 | 15 | 4 | 129 | 295 | 272 | 414 |
| Indiana | 12 | 4 | 5 | 11 | 12 | 12 | 56 | 146 | 34 | 175 |
| Illinois | 32 | 33 | 15 | 14 | 14 | 10 | 118 | 243 | 120 | 498 |
| Michigan | 18 | 16 | 10 | 7 | 4 | 6 | 61 | 328 | 224 | 531 |
| Wisconsin | 67 | 45 | 40 | 25 | 18 | 23 | 218 | 118 | 88 | 275 |
| Minnesota | 10 | 9 | 6 | 5 | 5 | 3 | 38 | 39 | 160 | 596 |
| Iowa | 10 | 10 | 5 | 8 | 3 | 4 | 40 | 130 | 50 | 416 |
| Missouri | 5 | 6 | 11 | 7 | 1 | 5 | 35 | 62 | 63 | 162 |
| North Dakota | - | 1 | - | - | 1 | 1 | 3 | 11 | 18 | 59 |
| South Dakota | - | - | - | - | - | - | - | 30 | 25 | 187 |
| Nebraska | 9 | 6 | 2 | - | 2 | 3 | 22 | 40 | 10 | 249 |
| Kansas | 3 | 1 | 5 | 2 | 1 | 1 | 13 | 58 | 35 | 210 |
| South | | | | | | | | | | |
| Delaware | - | 1 | - | 1 | - | - | 2 | 22 | 3 | 9 |
| Maryland | 10 | 11 | 3 | 3 | 3 | 5 | 35 | 51 | 48 | 39 |
| District of Col. | 1 | 3 | 1 | - | - | 1 | 6 | 13 | 6 | 6 |
| Virginia | 6 | 3 | - | 5 | 3 | 1 | 18 | 65 | 53 | 61 |
| West Virginia | 4 | 1 | 1 | 4 | 2 | 2 | 14 | 39 | 32 | 73 |
| North Carolina | 13 | 12 | 16 | 5 | 7 | 6 | 59 | 51 | 55 | 78 |
| South Carolina | 13 | 9 | 3 | 5 | - | 3 | 33 | 23 | 15 | 34 |
| Georgia | 3 | 9 | 2 | 6 | 1 | 5 | 26 | 43 | 19 | 53 |
| Florida | 4 | 5 | 2 | 4 | 10 | 2 | 27 | 209 | 84 | 123 |
| Kentucky | 7 | 7 | 18 | 5 | 2 | 1 | 40 | 88 | 43 | 167 |
| Tennessee | 1 | 6 | 4 | 2 | 1 | 2 | 16 | 54 | 37 | 77 |
| Alabama | 4 | 2 | - | 4 | - | 1 | 11 | 23 | 19 | 28 |
| Mississippi | 4 | 2 | - | 4 | 3 | 3 | 16 | 40 | 18 | 32 |
| Arkansas | 3 | 3 | - | 4 | - | 1 | 11 | 42 | 26 | 34 |
| Louisiana | 9 | 3 | 5 | 5 | 2 | 2 | 26 | 49 | 24 | 68 |
| Oklahoma | 4 | 8 | 4 | 10 | 1 | 2 | 29 | 21 | 30 | 94 |
| Texas | 51 | 33 | 18 | 32 | 20 | 7 | 161 | 206 | 140 | 121 |

Table 1 (Continued)

| State | Cases Reported to NOVS* During Week Ending: 10/29 | 11/5 | 11/12 | 11/19 | 11/26 | 12/3 | 6 Week Total | Comparable Totals in: 1954 | 1953 | 1952 |
|---|---|---|---|---|---|---|---|---|---|---|
| West | | | | | | | | | | |
| Montana | 7 | 8 | 2 | 1 | 2 | 2 | 22 | 29 | 39 | 45 |
| Idaho | 1 | 1 | 8 | 4 | 6 | 2 | 22 | 12 | 25 | 67 |
| Wyoming | 1 | - | 1 | 1 | - | - | 3 | 32 | 9 | 33 |
| Colorado | 2 | 6 | 3 | 4 | 3 | 1 | 19 | 33 | 9 | 89 |
| New Mexico | 2 | 3 | 3 | 2 | 1 | 3 | 14 | 17 | 7 | 44 |
| Arizona | 4 | 4 | 2 | 3 | - | - | 13 | 19 | 26 | 74 |
| Utah | 7 | 1 | 1 | 2 | - | 2 | 13 | 50 | 35 | 142 |
| Nevada | 3 | 4 | 1 | 3 | - | - | 11 | 4 | 2 | 37 |
| Washington | 26 | 26 | 23 | 18 | 19 | 14 | 126 | 73 | 58 | 198 |
| Oregon | 22 | 22 | 20 | 15 | 10 | 15 | 104 | 77 | 87 | 95 |
| California | 60 | 48 | 87 | 65 | 41 | 53 | 354 | 452 | 654 | 1111 |

* National Office of Vital Statistics

*Table 2*

*Poliomyelitis Cases in Vaccinated Individuals*
*(PSU Accepted Cases through December 7, 1955)*

| | Vaccine Manufacturer and Paralytic Status** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | C | | L | | PD | | PM | | W | |
| | P | NP | P | NP | P | NP | P | NP | P | NP |
| **CASES VACCINATED 5-7 OR BEFORE WITH ONSETS 30 DAYS OR LESS AFTER VACCINATION*** ** | | | | | | | | | | |
| Totals through 12-7 | 59 | 17 | 17 | 29 | 4 | 5 | 3 | 5 | 9 | 4**** |
| | 76 | | 46 | | 9 | | 8 | | 13 | |
| **CASES VACCINATED 5-7 OR BEFORE WITH ONSETS 31 DAYS OR MORE AFTER VACCINATION*** ** | | | | | | | | | | |
| Totals through 11-29 | 12 | 17 | 31 | 140 | 15 | 83 | 12 | 17 | 16 | 52 |
| New Cases 11-30 through 12-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Totals through 12-7 | 12 | 17 | 31 | 140 | 15 | 83 | 12 | 17 | 18 | 52 |
| | 29 | | 171 | | 98 | | 29 | | 70 | |
| **CASES VACCINATED 5-8 OR LATER WITH ONSETS 30 DAYS OR LESS AFTER VACCINATION*** ** | | | | | | | | | | |
| Totals through 11-29 (Revised) | | | 28 | 73 | 23 | 39* | 4 | 9 | 4 | 9 |
| New Cases 11-30 through 12-7 | | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| Totals through 12-7 | | | 28 | 74 | 24 | 39* | 4 | 9 | 4 | 10 |
| | | | 102 | | 63 | | 13 | | 14 | |
| **CASES VACCINATED 5-8 OR LATER WITH ONSETS 31 DAYS OR MORE AFTER VACCINATION*** ** | | | | | | | | | | |
| Totals through 11-29 | | | 20 | 62 | 68 | 240* | 0 | 1 | 1 | 4 |
| New Cases 11-30 through 12-7 | | | 0 | 2 | 1 | 5 | 0 | 0 | 0 | 0 |
| Totals through 12-7 | | | 20 | 64 | 69 | 245* | 0 | 1 | 1 | 4 |
| | | | 84 | | 314 | | 1 | | 5 | |

*Including one case that received either Parke-Davis or Lilly vaccine.
**Vaccine Manufacturers: C - Cutter; L - Lilly; PD - Parke-Davis; PM - Pitman-Moore W - Wyeth
Paralytic Status: P - Paralytic; NP - Non-paralytic
***Cases in individuals who had two inoculations are listed according to the second inoculation. No inoculations with Cutter vaccine given after May 7.
****Including one new case since 11-29.

# POLIOMYELITIS AMONG VACCINATED INDIVIDUALS
## (PSU Accepted Cases December 2 - December 7, 1955)

| PSU CASE NO. | County | Initials | Age | Sex | Date Inoc. | Date 1st Symp. | Date 1st Para. | Site Inoc. | Site 1st Para. | Mfr. | Lot No. | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | NEW | | | | | |
| NY-163 | Monroe | LJT | 8 | F | 5-27 | 10-10 | None | LA | None | PD | 029128C | Spinal fluid, 79 cells. |
| | | | | | 8-11 | | | LA | | L | 6002-653805 | |
| NY-164 | Nassau | VLaM | 8 | M | May | 9-28 | None | LA | None | PD | 028861B | Spinal fluid,120 cells. |
| | | | | | June | | | LA | | PD | 028861B | |
| NY-165 | Monroe | AL | 7 | M | 5-26 | 10-5 | None | LA | None | PD | 029128C | |
| | | | | | 8-17 | | | LA | | L | 6002-653805 | |
| NY-166 | Nassau | TS | 9 | M | May | 9-11 | None | LA | None | PD | 029128C | Spinal fluid,700 cells. |
| | | | | | June | | | LA | | PD | 029128C | |
| NY-167 | Nassau | RS | 7 | M | June | 9-2 | None | LA | None | PD | 028850B | Spinal fluid,100 cells. |
| NY-168 | Nassau | MS | 7 | M | May | 8-18 | None | LA | None | PD | 028850B | |
| RI-18 | Providence | RFV | 7 | M | May | 9-29 | 10-1 | ? | Palate | PD | 028848A | |
| | | | | | 9-21 | | | ? | | PD | 028848A | |
| Pa-40 | Montgomery | NB | 8 | M | 4-26 | 5-21 | None | LA | None | W | 23506 | Spinal fluid,135 cells. |
| Pa-41 | Lehigh | FY | 7 | M | 5-5 | 9-7 | ? | LA | Bulbar | W | 23714 | |
| Pa-42 | Allegheny | PS | 7 | F | April | 8-18 | ? | LA | LL | W | 23408 | |
| Minn-25 | Hennepin | NBN | 8 | F | 5-24 | 7-22 | None | LA | None | PD | 028849A | Spinal fluid, 36 cells. |
| Cal-137 | San Bernardino | CG | 5 | M | 10-18 | 10-19 | None | LA | None | W | 23812 | |
| Cal-138 | L. A. Co. | JF | 7 | F | 5-17 | 11-18 | 11-25 | LA | RA,LL | PD | 028848A | |
| | | | | | 8-15 | | | RA | RL | PD | 029126A | |
| Cal-139 | Marin | CC | 7 | F | 5-31 | 9-21 | None | LA | None | L | 8124-649336 | |
| | | | | | 9-21 | | | LA | | L | 8119-649331 | |

| PSU CASE NO. | County | Initials | Age | Sex | Date Inoc. | Date 1st Symp. | Date 1st Para. | Site Inoc. | Site 1st Para. | Mfr. | Lot No. | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | REVISIONS<br>Revised Items Underlined | | | | | | | |
| Wyo-4 | Park | JH | 5 | F | 10-20 | 11-17 | None | ? | None | W | 24115 | Spinal fluid, 55 cells. |
| Cal-131 | San Bernardino | MG | 4 | F | 10-18 | 11-5 | None | LA | None | W | 23812 | |